

Work Order ID 53377

November 3, 2009 8:11:22 AM



Page 1

Item ID: D4013-7

Accept



Setup Start



Revision ID:

Stop



Item Name: Cup

Start Date: 03/11/2009 Start Qty: 10.00



Required Date: 03/11/2009 Req'd Qty: 10.00

Reference:

09.11.03

PRELIMINARY ISSUE



Approvals: Process Plan: _____ Date: _____ Tooling: _____ Date: _____

Run Start



QC: _____ Date: _____ SPC (Y/N): _____ Date: _____

Stop



Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
--------------------------------	--------------------------	----------------------	----------------	--------------	--------------	---------------	---------------	------------------	----------------

Draw Nbr	Revision Nbr
D4013	B-PRELIM

100



Hardinge

Hardinge CNC Lathe Small

Memo

turn as per Dwg X Folio FA862

FOLIO REV: *W/B*

Dwg Rev: *Prelim*

Deburr

0.00

0.00

5109/11/03

8 *0*

110



QC

Quality Control

QC2- Inspect parts off machine FAI/FAIB

Memo

0.00

0.00

5109/11/03

4 *0*

Work Order ID 53377



Page 2

November 3, 2009 8:11:22 AM

Item ID:	D4013-7	Accept		Setup	Start	
Revision ID:					Stop	
Item Name:	Cup					
Start Date:	03/11/2009	Start Qty:	10.00		Cust Item ID:	
Required Date:	03/11/2009	Req'd Qty:	10.00		Customer:	
Reference:						

Approvals:	Process Plan:	Date:	Tooling:	Date:	Run	Start	
	QC:	Date:	SPC (Y/N):	Date:		Stop	

Sequence ID/ Work Center ID	Operation Description	Set Up/ Run Hours	Draw Number	Draw Rev.	Plan Code	Accept Qty	Reject Qty	Reject Number	Insp. Stamp
120 	QC8- Inspect parts - second check	0.00				8	0		
QC Quality Control	Memo	0.00							
	ENGINEERING APPROVAL								
	<i>09.11.03</i>								
	<i>06.11.03</i>								
130 	Identify as per dwg & Stock Location: <i>MISC</i>	0.00							
Packaging Packaging	Memo	0.00							
140 	QC21- Final Inspection - Work Order Release	0.00							
QC Quality Control	Memo	0.00							

USE FOR TESTING
SCRAP + DESTROY
REMAINING PARTS
06.11.27

09.11.03

09.11.03 Prototype
RD 0324 ADEC
W 09/12/14

Picklist Print

Page 1

November 3, 2009 8:11:21 AM

Work Order ID: 53377



Parent Item: D4013-7



Parent Item Name: Cup


Start Date: 03/11/2009

Required Date: 03/11/2009

Comments: IPP REV:A NEW ISSUE 09-11-03 JLM VERIFIED BY:DD

Start Qty: 10.00

Required Qty: 10.00

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Remaining Qty To Pick	Qty Issued	Date Issued	Status
M304R1.00  304 ROUND BAR 1.00		Purchased					f	0.0000	1.5789			

R 107508

SA 09/11/03

Use D4013-11
B53375
For NOT. CUST.

~~POSITIVE RECALL~~

EFFECTIVE

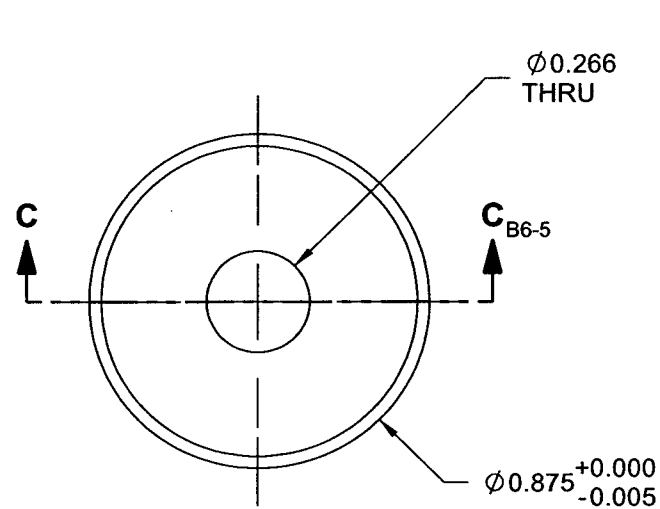
AUTH

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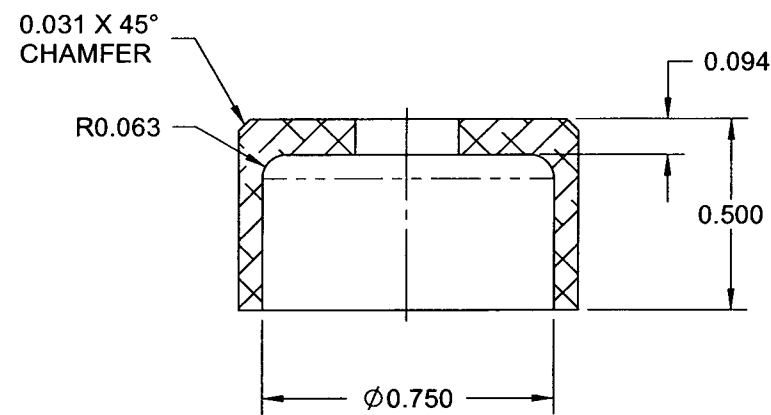
DATE

2009.12.27

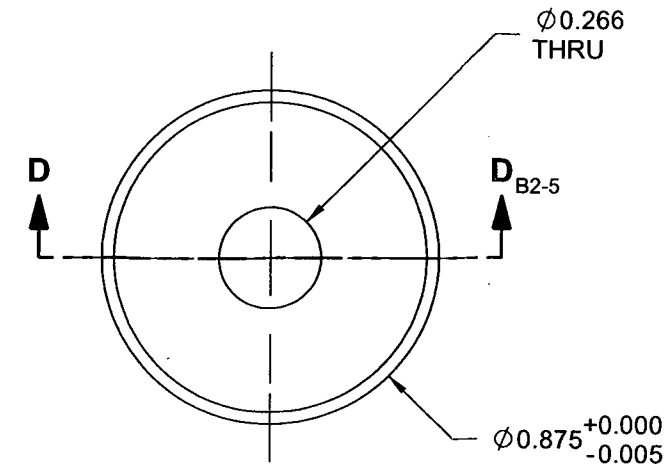
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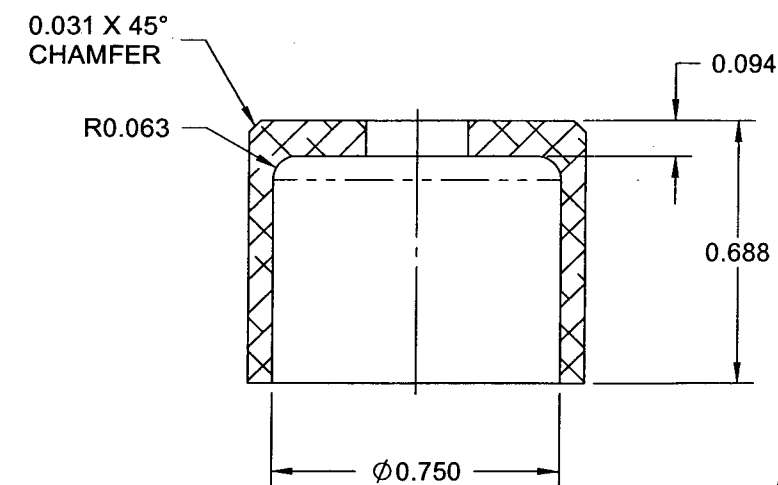
D4013-5 CUP



SECTION C-C D6-5



D4013-7 CUP



SECTION C-C D2-5

PRELIMINARY ISSUE
 09.11.02
 POC 000409-698P

- NOTES:**
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
REF. DART SPEC. M304R
 - 2) FINISH: NONE
 - 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
 - 4) UNITS: INCHES UNLESS OTHERWISE NOTED
 - 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
 - 6) IDENTIFICATION: NONE
 - 7) WEIGHT: 0.03 lbs EACH

DESIGN		DART AEROSPACE LTD	
DRAWN		HAWKESBURY, ONTARIO, CANADA	
CHECKED		DRAWING NO.	REV. B
MFG. APPR.		D4013	SHEET 5 OF 5
APPROVED		TITLE	SCALE
DE APPR.		WEARPLATE ASSEMBLY	NTS
DATE	09.11.02	COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.	

Receiving Report

Date: 8/14/03
 Supplier: MAGNA

Batch No: M109508
 Dart P/O: 7287

Packing Slip: Yes ☒ No ☐
 Invoice: Yes ☐ No ☒
 Receipt: Cash ☐ Cr ☒

Release Note Attached: Yes ☒ No ☐ N/A ☐
 Waybill Attached: Yes ☐ No ☒ N/A ☐
 Shipment Complete: Yes ☒ No ☐ N/A ☐
 QC6 Inspection ☒ N/A ☐
 Work Order ☐ N/A ☒

Discrepancies

Part Number	Description	Quantity Ordered	Quantity Received	Quantity Returned	Quantity Short	Comments

Initials of receiver (if shipment OK) [Signature] Level 12

Production/Admin: 08/10/06
 Date: 08/10/06
 Received/Costing: 08
 Initial: 08

Location

SOLD TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

SHIP TO:
DART AEROSPACE LTD
1270 ABERDEEN STREET

HAWKESBURY , ON
K6A 1K7
Contact: CHANTAL

HAWKESBURY , ON
K6A 1K7
Ship Terms: PREPAID

MTR:Y

SPECIAL INSTRUCTIONS

STOCK

Currency		Sales Person	Customer Phone	Customer Fax	Customer PO	
CANADIAN DOLLARS		ERYCK BLAIS	(613) 632-5200	(613) 632-1053	7287	
Sales Order	Terms	Ship Via		Date Ordered	Date Required	Date Shipped
W001398	NET 30 DAYS	TARGET		10/02/08	10/03/08	10/03/08

Ordered	Back Ordered	Unit	Description	Bundle #	Heat #	Shipped
4		PC	STAINLESS ROUNDS SRB 303 1/2" x R/L			
6	→	PC	SRB 304 1" x R/L			
			12'1" 32 LB / 4 PC	L009029	14523	
			12'5" 202 LB / 6 PC	L015199	419280	
			FUEL SURCHARGE			
Bundles: 1			Total Weight:	234 LB		

PC 8/1/03

Received by: _____ Date: _____ Signature: _____

Acciaierie Valbruna S.p.A.



CERTIFICATO DI COLLAUDO ABNAHMEPRUEFZEUGNIS INSPECTION CERTIFICATE CERTIFICAT DE RECEPTION EN 10204, 3.1

36100 VICENZA (Italia) - Viale della scienza, 25 z.i.
Stab.: 39100 BOLZANO (Italia) - Via A. Volta, 4

Cliente / Besteller/Purchaser/Cliet
VALBRUNA CANADA LTD
8724 HOGGATE CRESCENT
CDN-MILTON, ONT L5T 5Z1-CAN

Produttore: ACCIAIERIE VALBRUNA S.P.A.
Hersteller/Item/Usine productrice

Avviso di Spedizione: D-VI07007544
Lieferanzettel/Packing list/B.L.

Ordine nr: 702001762 STOCK
Bestell/Your order/Commande

Certificato nr: MEST466400/2007/
Prüfung/Test/Essai

Conferma ordine nr: EI07001200
Works/Our Order/Ref. nr.

Marchio di Fabbrica:
Zeichen des Lieferwerkes
Trade mark
Sigle de l'usine productrice



Oggetto Prove: - Annealed Cold Drawn
Prüfgegenstand/Item Inspected/Finissage

Tipo di Elaborazione: E+AOD
Erschmelzungsart/Melting process/Mode d'elaboration

Punzone del Collaudatore:
Stempel des Werkstättensachverständigen
Inspector's stamp/Plombon de l'essayeur

Specifiche:
Anforderungen / Requirements / Exigences

VAL CANADA 2 304/304L A,CF
ASME SA182 2004 S30400/03 0
ASME SA479 2004 S30400/03 3
ASTM A262 2002A PRACTICE E
ASTM A320 2005A B8
NACE MR0175 2003 S30400/03 A 5
(0) SEC.II PT.A 2004 EDITION ADD.2006
(1) SEC.II PT.A 2004 EDITION ADD.2006
(3) SEC.II PT.A 2004 EDITION ADD.2006
(5) * ISO 15156-3

AMS 5639 H S30400
ASME SA193 2004 B8 1
ASTM A182 2006 S30400/03 4
ASTM A276 2006 S30400/03
ASTM A479 2006 S30400/03
QQ-S-763 F 304/304L

AMS 5647 H S30403
ASME SA320 2004 B8 (2)
ASTM A193 2006A B8
ASTM A314 97 S30400/03
MIL-S-862 B/1 304/304L

0Chemical analysis only.
2SEC.II PT.A 2004 EDITION ADD.2006
4Chemical analysis only.

Qualità: T-304L
Werkstoff/Grade/Nuance

Marca: MVAISL MAXIVAL
Markenbezeichnung/Brand/Nuance

Punzonatura: T-304L
Kennzeichnung/Marking/Marquage

Pos. nr. Pos. nr. Item nr. Nr. de poste	Oggetto Gegenstand Product description Descrip. du produit	Dimensioni - In Abmessungen Dimension Dimension	Tolleranza Toleranz Allowance Tolerance	Lunghezza - Ft Länge Length Longueur	Colata Schmelze Heat Coulée	Pezzi Stückzahl Pieces Pièces	Peso - Kg Gewicht Weight Poids	Lotto nr. Losv. Lot nr. Lot nr.
0030	Round	1,0000	484-05A	12 / 12	419280		18.116	703905280

Sono state soddisfatte tutte le condizioni richieste
Die gestellten Anforderungen sind in der Anlage erfüllt
The material has been furnished in accordance with the requirements
Le matériel a été livré conforme aux exigences

Controllo antimiscelanza: OK
Verwechslungsprüfung: spektralanalytisch durchgeführt
Antimixing testing performed: OK
Contrôle antimélange fait: r.a.s.

Controllo visivo e dimensionale: soddisfatta le esigenze
Beichtigung und Ausmessung: ohne Beanstandung
Visual inspection and dimensional checks: satisfactory
Contrôle visuel et dimension: satisfaisant

TEST	Provetta / Probe Spezialmess / Spezialmess Lang. diam. Spess. Bohr. Diam. Dicke Werk. diam. épaisseur Lang. diam. epais. mm	°F	Posiz. Saggio Position Position mm	Snervamento Streckgrenze Yield Stress Limite élastique Rp 0,2% k.s.i.	Snervamento Streckgrenze Yield Stress Limite élastique k.s.i.	Resistenza Zugfestigkeit Tensile strength Résistance à traction Rm k.s.i.	Allungamento Bruchdehnung Elongation Allongement E 4d %	Strizione Einengung Reduction of area Striction RA %	Resistenza Kerbschlagarbeit Impact Value Resilience	Durezza Härte Hardness Dureté HB 1/2 r.
Valori richiesti 1 Anforderungen/Required values Valeurs demandées	min max			30	-	75	40	50	-	140 223
A	12,5	68	L	72		99	45	67		220

Grain size for ASTM E112 : 5

1) L=longitudinale/längs, O=transversale/quer, T=Tangenziale/tangential

Analisi chimica

Chemische Zusammensetzung/Chemical Analysis/Analyse chimique

Colata / Heat Schmelze/Coulée	min - max 0,030	1,00	2,00	18,00 20,00	1,00	1,00	8,00 10,50	-	0,040	0,030	0,100	-	-	-	-
	C %	Si %	Mn %	Cr %	Mo %	Cu %	Ni %	Co %	P %	S %	N %				
419280	0,018	0,57	1,79	18,07	0,46	0,72	8,15	0,076	0,026	0,027	0,096				

Produced without class I-II Ozone depleting substances.

Solution heat treated free from continuous carbide network.

Annealing temperature: 1960°F for 1 H/H2O.

Micro and macro etch test: OK

Intergranular corrosion test per ASTM A262 pract. E: ok.

Material is DFARS Compliant

Melted and manufactured in Italy No welding or weld repair Material free from Mercury or radio-activity contamination

The Quality Management System is Certified acc. Pressure Equipment Directive [97/23/EC] Annex 1.s.4.3 by TUEV and LLOYD'S

Vicenza, 09/03/07

CO008
(Mod. MCER)

Il collaudatore di stabilimento / der Werkstättensachverständiger / Works inspector / L'agent d'usine

M. Rizzotto

Pagina - 1 di 1

DART

Purchase Order

Date	Page
Oct 02, 2008	1
Purchase Order Number PO00007287	

Dart Aerospace Ltd
1270 Aberdeen St
Hawksbury, Ontario K6A 1K7
Phone: (613)632-9577
Fax: (613)632-1053

FAKED
08/10/08

Vendor Address:

Magna Stainless
525 avenue Meloche
Dorval, QC H9P 2W2
Canada
Phone (800) 363-6646
Fax (514) 631-0013

Ship To:

Main Finished Goods Location
Dart Aerospace Ltd
1270 Aberdeen St
Hawksbury, Ontario K6A 1K7

Reference	Contact	Vendor Number	PO Date	Terms	Ship Via	Expected Arrival
		VC-MAG002	Oct 02, 2008	N30	yours	Oct 03, 2008

Qty. Ordered	Item Number	Description	Expected Arrival	Drop-Ship	Unit Cost	UOM	Extended Price
40.0000 48.40 P/K	M303R0500	303 Round Bar 0.500" Comments: MATERIAL: AISI 303 ROUND BAR (NOTE: AISI 304/316 NOT ACCEPTABLE)	10/3/2008	No	2.450000	f	98.00
72.0000 78.116	M304R1000	304 round bar 1.00 Comments: MATERIAL: AISI 304/316 ROUND BAR (NOTE: AISI 303 NOT ACCEPTABLE)	10/3/2008	No	8.500000	f	612.00

**MATERIAL CERTIFICATION
REQ'D UPON DELIVERY**

Comments:

Tax Summary:
GST 35.50
ONT PST 0.00

Less:
included tax

0.00

Subtotal

710.00

Total tax

35.50

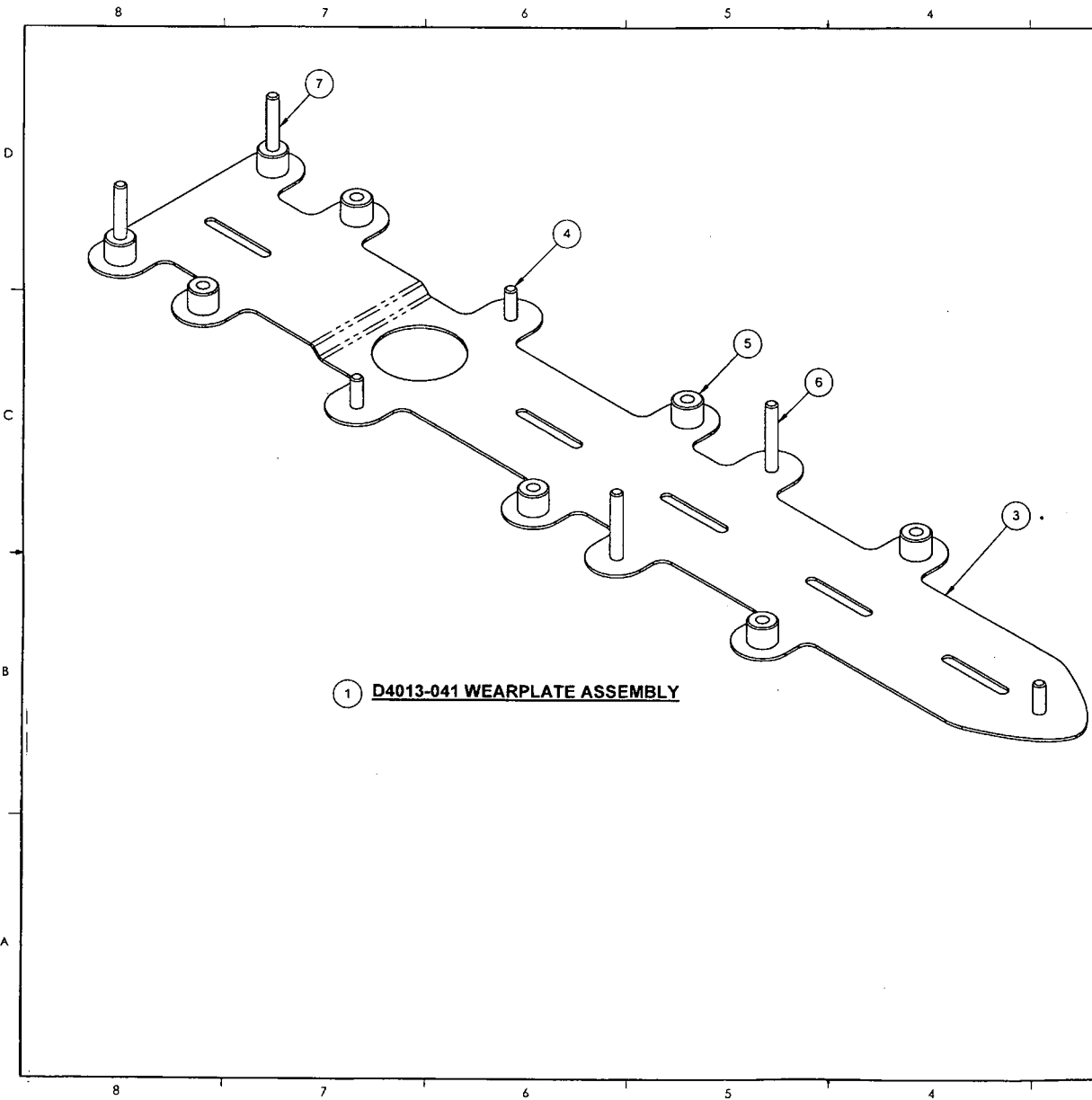
Total purchase order in

CAD Dollars

745.50

Entered By: CL CLAVOIE

Approved By: W



1 D4013-041 WEARPLATE ASSEMBLY

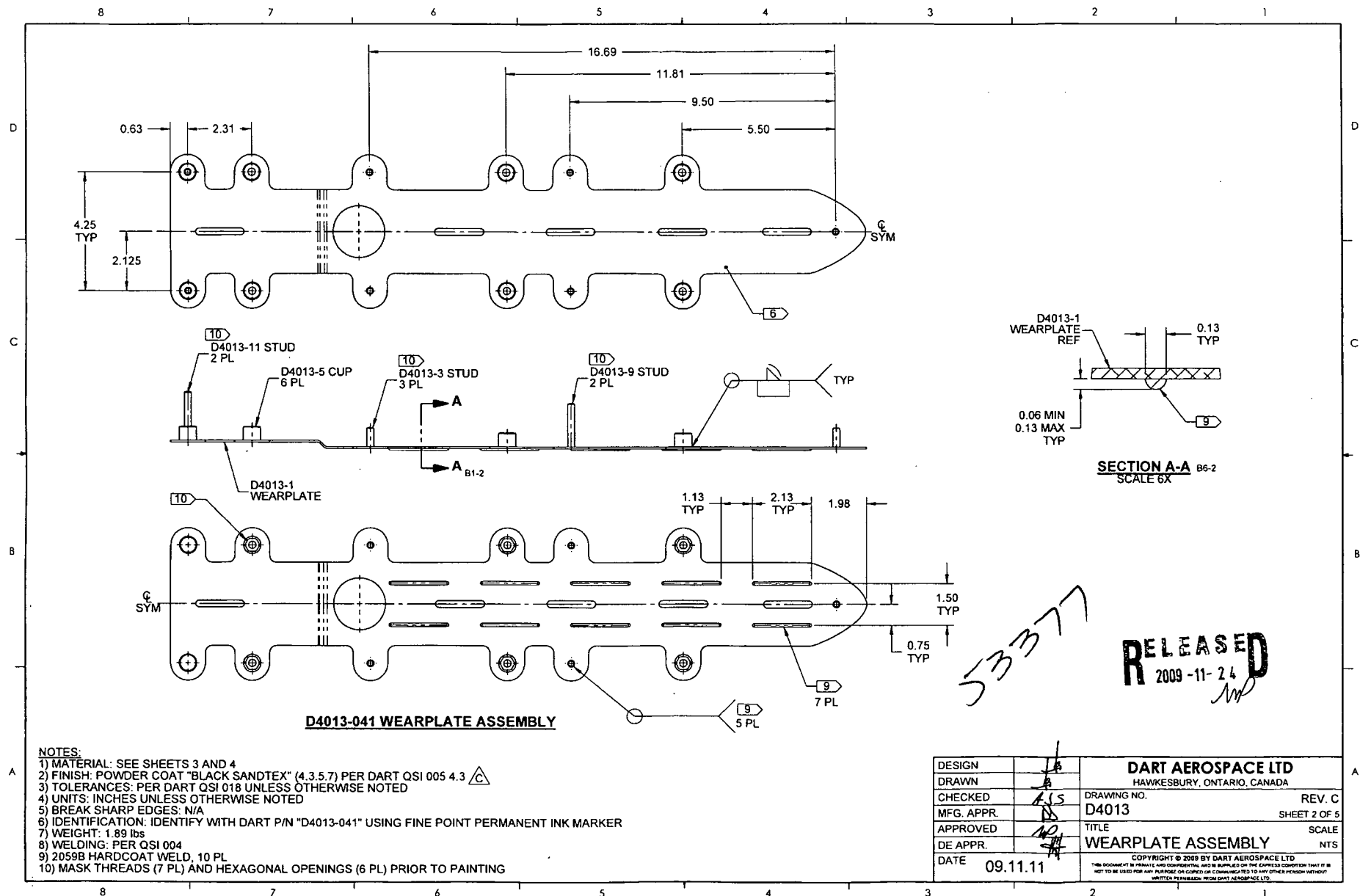
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1	X	D4013-041	WEARPLATE ASSEMBLY
3	1	D4013-1	WEARPLATE
4	3	D4013-3	STUD
5	6	D4013-5	CUP
6	2	D4013-9	STUD
7	2	D4013-11	STUD
21	A/R	2059B	HARDCOAT

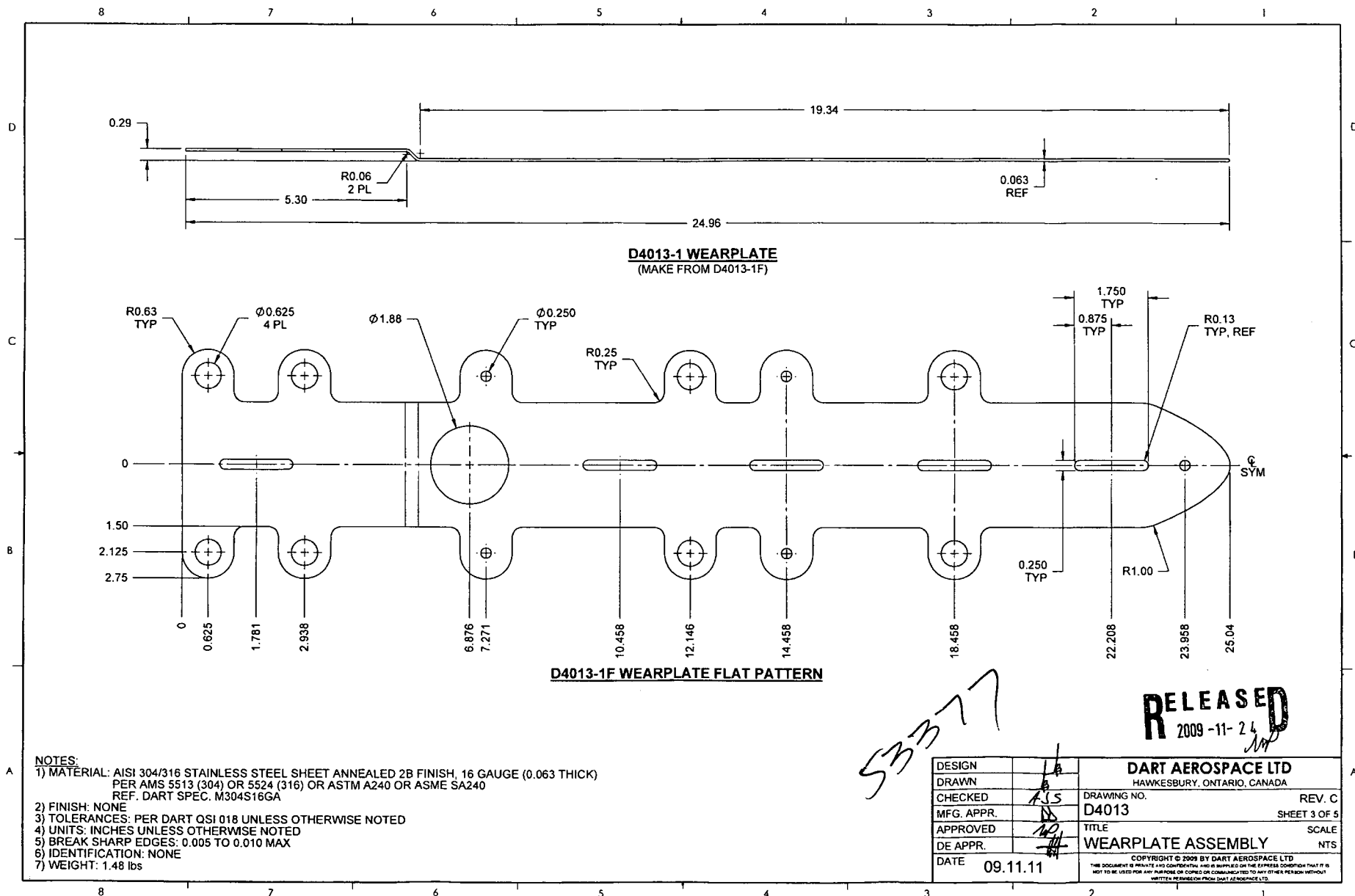
53377

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R 2009-11-24
MP

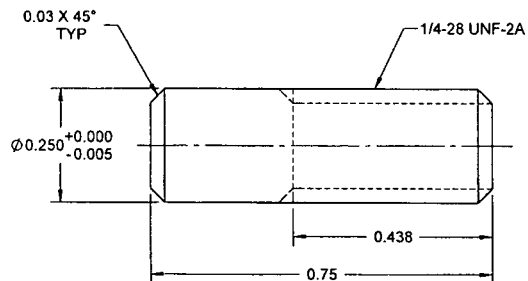
C	SIMPLY DESIGN FOR MANUFACTURING PURPOSES; REDESIGNED ITEM 5, ELIMINATED D4013-7 CUP (NO LONGER USED); CHANGED FINISH FROM GREY TO BLACK SANDTEX	MB	09.11.11
B	REDESIGN	MB	09.11.02
A	NEW ISSUE	MB	09.10.22
REV.	DESCRIPTION	BY	DATE
DESIGN	LA		
DRAWN	LA		
CHECKED	AS		
MFG. APPR.	AS		
APPROVED	AS		
DE APPR.	AS		
DATE	09.11.11		

DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
DRAWING NO. D4013	REV. C SHEET 1 OF 5
TITLE WEARPLATE ASSEMBLY	SCALE NTS
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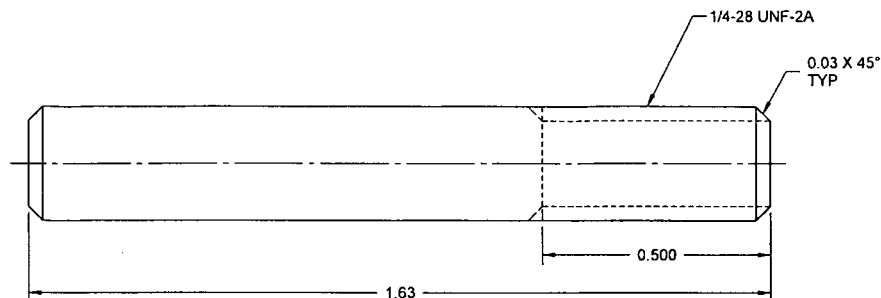




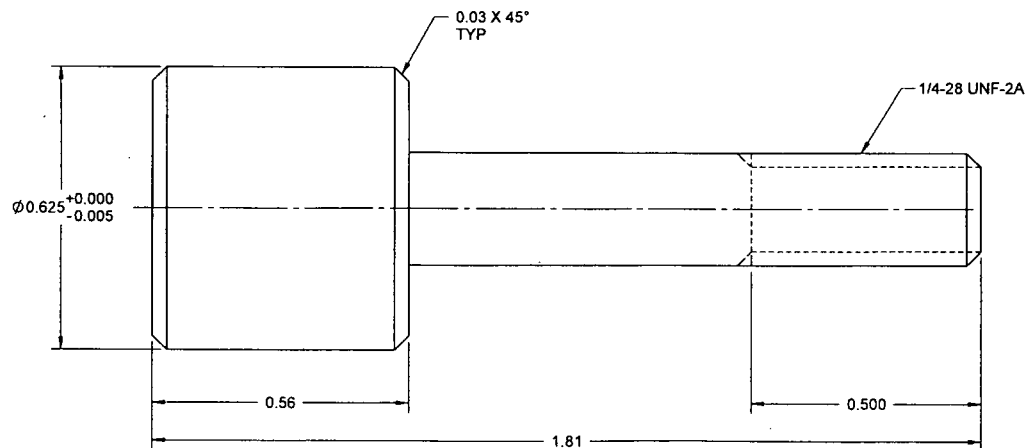
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D4013-3 STUD



D4013-9 STUD



D4013-11 STUD

53377

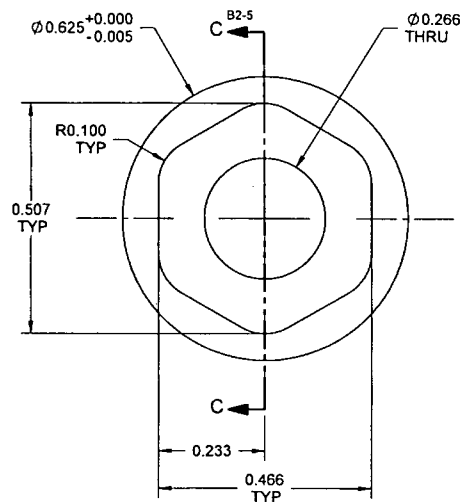
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2009-11-24

NOTES:

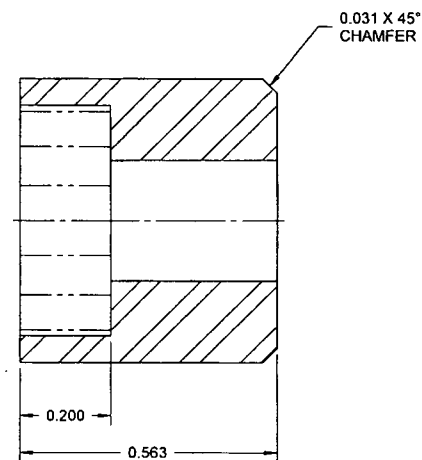
- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR
REF. DART SPEC. M304R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: LESS THAN 0.01 LBS EACH

DESIGN	LA	DART AEROSPACE LTD	
DRAWN	LA	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. C
MFG. APPR.	AS	D4013	SHEET 4 OF 5
APPROVED	LA	TITLE	SCALE
DE APPR.	LA	WEARPLATE ASSEMBLY	NTS
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8 7 6 5 4 3 2 1



D4013-5 CUP



SECTION C-C D6-5

NOTES:

- 1) MATERIAL: AISI 304/316 STAINLESS STEEL ROUND BAR PER ASTM A276
REF. DART SPEC. M304R
- 2) FINISH: NONE
- 3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED
- 4) UNITS: INCHES UNLESS OTHERWISE NOTED
- 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX
- 6) IDENTIFICATION: NONE
- 7) WEIGHT: 0.03 lbs EACH

DESIGN	JB	DART AEROSPACE LTD	
DRAWN	JB	HAWKESBURY, ONTARIO, CANADA	
CHECKED	AS	DRAWING NO.	REV. C
MFG. APPR.	AS	D4013	SHEET 5 OF 5
APPROVED	MD	TITLE	SCALE
DE APPR.	MD	WEARPLATE ASSEMBLY NTS	
DATE	09.11.11	<small>COPYRIGHT © 2009 BY DART AEROSPACE LTD THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL AND IS SUPPLIED ON THE EXPRESS CONDITION THAT IT IS NOT TO BE USED FOR ANY PURPOSE OR COPIED OR COMMUNICATED TO ANY OTHER PERSON WITHOUT WRITTEN PERMISSION FROM DART AEROSPACE LTD.</small>	

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2009-11-24
MD

53377